

Patent Application
NC 84,352

Amendments of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A product that is essentially devoid of a sintering aid and its components, said product comprising spinel that has porosity of less than 0.2 %, said spinel is transparent to light having wavelengths in the range of 0.3-5.5 microns and said spinel having transparency in excess of 50 % for a thickness of 1 mm, its spinel grains are within about 300% of the size of an average grain and is devoid of grains larger than about 1 mm.

Claim 2 (canceled)

Claim 3 (canceled)

Claim 2 (canceled)

Claim 4 (previously amended) The product of claim 1 devoid of grains of exaggerated size having transparency of at least 60 % for a 1 mm thickness at a wavelength of 4 microns and said product is a hard crystalline solid selected from the group consisting of oxides of magnesium and aluminum.

Claim 5 (previously amended) The product of claim 2 1 having transparency of at least 60 % for a 1 mm thickness at a wavelength

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of 4.0 μm and the spinel is a hard crystalline solid MgAl_2O_4 .

Claims 6-18 (withdrawn)

Claim 19 (previously added)): A magnesium aluminate spinel sintered product that is essentially devoid of a sintering aid and its components, that has porosity of less than 0.2%, has uniform grain size wherein the grains are less than 300% of the average grain size and is devoid of grains larger than about 1mm.

Claim 20 (previously added)): The product of claim 19 having transparency in excess of 50 % for a thickness of 1 mm to light of 0.3-5.5 μm wavelength.

Claim 21 (canceled))